



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,816	01/30/2004	Nobumasa Suzuki	03599.000093.	3133

5514 7590 10/26/2005

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
----------	--------------

1763

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

105

Office Action Summary	Application No. 10/766,816	Applicant(s) SUZUKI, NOBUMASA	
	Examiner Jeffrie R. Lund	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-6 and 20 is/are allowed.
- 6) ☐ Claim(s) 7-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sone, US Patent 6,200,431 B1.

Sone teaches an oxidation processing chamber 9 that includes: an object to be processed 2 located upstream of the plasma in the flow; a plasma 5; a first gas introducing part 3 for introducing gas into the plasma generating chamber; an exhaust mechanism 25 arranged in the plasma generating region; a conductance adjuster 6 with holes 6a for maintaining a concentration of active species in the process chamber space that encloses the object; and a second gas introducing part 4. (Figure 6) The operation of the exhaust mechanism 25 results in a pressure gradient with the lowest pressure in the plasma region. The specific gas supplied to each gas introducing part is an intended use of the apparatus, and each gas introducing part is inherently capable of supplying any desired gas.

Allowable Subject Matter

3. Claims 1-6, and 20 are allowed.
4. The following is an examiner's statement of reasons for allowance:
 - a. The arrangement of the object, gas introducing part, and exhaust

mechanism as claimed in claim 1, specifically, a mechanism that arranges the object in a flow of the gas such that the object is (i) closer to the gas introducing part than to a plasma generating region and (ii) between the gas introducing part and the plasma generating region in the flow of the gas; and an exhaust mechanism, which is arranged closer to the plasma generating region than to the object, for exhausting the gas was not found in or suggested by the art.

b. A processing apparatus that provides a plasma treatment to an object, said processing apparatus comprising a process chamber that accommodates an object to be processed and generates plasma, and arrangement of the gas introducing part, object, and plasma as claimed in claim 20, specifically, a mechanism that arranges the object in the flow of the gas further upstream than the plasma in the flow of the gas was not found in or suggested by the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Applicant's arguments, see page 10, first full paragraph, filed July 18, 2005, with respect to claims 1-6 have been fully considered and are persuasive. The rejection of claims 1-6 has been withdrawn.

6. Applicant's arguments filed July 18, 2005 have been fully considered but they are not persuasive.

Art Unit: 1763

In regard to the argument that Sone teaches does not teach “an exhaust mechanism, which is arranged closer to the plasma generating region than the object, for exhausting the gas”, the Examiner disagrees. The arguments are based on a disclosed use of Sone, not the structure taught by Sone. As explained above, Sone teaches an exhaust mechanism 25 arranged in the plasma 5. The exhaust mechanism 25 is clearly arranged closer to the plasma generating region 5 than the object 2.

In regard to the argument that Sone does not teach, “maintaining a concentration of reactive species from 10^9 to 10^{11} cm^{-3} ”, the Examiner agrees. However, the concentration of reactive species is an intended use of the apparatus. Sone has the same structural elements as the disclosed invention, and therefore is capable of maintaining the claimed concentration. Furthermore, it has been held that: claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danley*, 120 USPQ 528, 531, (CCPQ 1959); “Apparatus claims cover what a device is, not what a device does” (Emphasis in original) *Hewlett-Packard Co. V. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); and a claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus “ if the prior art apparatus teaches all the structural limitations of the claim *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Also see MPEP 2114

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the

Art Unit: 1763

invention.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 1763

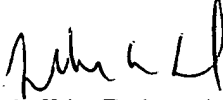
published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
10/17/05